Sequence Listing

<110> Garrard, Lisa J.
　　　 Henner, Dennis J.
　　　 Bass, Steven
　　　 Greene, Ronald
　　　 Lowman, Henry B.
　　　 Wells, James A.
　　　 Matthews, David J.

<120> ENRICHMENT METHOD FOR VARIANT PROTEINS WITH ALTERED
　　　 BINDING PROPERTIES

<130> P0645P4D2C3

<140> US 09/717,641
<141> 2000-11-21

<150> US 08/922,345
<151> 1997-09-03

<150> US 08/463,587
<151> 1995-06-05

D4

<150> US 08/050,058
<151> 1993-04-30

<150> PCT/US91/09133
<151> 1991-12-03

<150> US 07/743,614
<151> 1991-08-09

<150> US 07/715,300
<151> 1991-06-14

<150> US 07/683,400
<151> 1991-04-10

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D14

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atggacaagg tgtcgacata cctgcgcatc gtg 33

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<223> unknown base

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tgtccgcctc tgtgggcgat agggtcacca tcacctgccg tgccagtcag 150

gatgtgaata ctgctgtagc ctggtatcaa cagaaaccag gaaaagctcc 200

gaaactactg atttactcgg catccttcct ctactctgga gtcccttctc 250

gcttctctgg atccagatct gggacggatt tcactctgac catcagcagt 300

ctgcagccgg aagacttcgc aacttattac tgtcagcaac attatactac 350

tcctcccacg ttcggacagg gtaccaaggt ggagatcaaa cgaactgtgg 400

ctgcaccatc tgtcttcatc ttcccgccat ctgatgagca gttgaaatct 450

ggaactgcct ctgttgtgtg cctgctgaat aacttctatc ccagagaggc 500

caaagtacag tggaaggtgg ataacgccct ccaatcgggt aactcccagg 550

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accctgacgc tgagcaaagc agactacgag aaacacaaag tctacgcctg 650

cgaagtcacc catcagggcc tgagctcgcc cgtcacaaag agcttcaaca 700

ggggagagtg ttaagctgat cctctacgcc ggacgcatcg tggccctagt 750

acgcaagttc acgtaaaaag ggtatctaga ggttgaggtg attttatgaa 800

aaagaatatc gcatttcttc ttgcatctat gttcgttttt tctattgcta 850

caaacgcgta cgctgaggtt cagctggtgg agtctggcgg tggcctggtg 900

cagccagggg gctcactccg tttgtcctgt gcagcttctg gcttcaacat 950

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ggaaccctgg tcaccgtctc ctcggcctcc accaagggcc catcggtctt 1250

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7

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       tgggcaccca gacctacatc tgcaacgtga atcacaagcc cagcaacacc 1500

       aaggtggaca agaaagttga gcccaaatct tgtgacaaaa ctcacacagg 1550

       gcccttcgtt tgtgaatatc aaggccaatc gtctgacctg cctcaacctc 1600

       ctgtcaatgc tggcggcggc tctggtggtg gttctggtgg cggctctgag 1650

       ggtggtggct ctgagggtgg cggttctgag ggtggcggct ctgagggagg 1700

       cggttccggt ggtggctctg gttccggtga ttttgattat gaaaagatgg 1750

       caaacgctaa taaggggggct atgaccgaaa atgccgatga aaacgcgcta 1800

       cagtctgacg ctaaaggcaa acttgattct gtcgctactg attacggtgc 1850

       tgctatcgat ggtttcattg gtgacgtttc cggccttgct aatggtaatg 1900

       gtgctactgg tgattttgct ggctctaatt cccaaatggc tcaagtcggt 1950

       gacggtgata attcaccttt aatgaataat ttccgtcaat atttaccttc 2000

       cctccctcaa tcggttgaat gtcgcccttt tgtctttagc gctggtaaac 2050

       catatgaatt ttctattgat tgtgacaaaa taaacttatt ccgtggtgtc 2100

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 Ser Ile Ala Thr Asn Ala Tyr Ala Asp Ile Gln Met Thr Gln Ser
                  20                  25                  30

 Pro Ser Ser Leu Ser Ala Ser Val Gly Asp Arg Val Thr Ile Thr
                  35                  40                  45

 Cys Arg Ala Ser Gln Asp Val Asn Thr Ala Val Ala Trp Tyr Gln
                  50                  55                  60

 Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile Tyr Ser Ala Ser
                  65                  70                  75

 Phe Leu Tyr Ser Gly Val Pro Ser Arg Phe Ser Gly Ser Arg Ser
```

8

```
Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro Glu Asp
                95                  100                 105

Phe Ala Thr Tyr Tyr Cys Gln Gln His Tyr Thr Thr Pro Pro Thr
                110                 115                 120

Phe Gly Gln Gly Thr Lys Val Glu Ile Lys Arg Thr Val Ala Ala
                125                 130                 135

Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Glu Gln Leu Lys Ser
                140                 145                 150

Gly Thr Ala Ser Val Val Cys Leu Leu Asn Asn Phe Tyr Pro Arg
                155                 160                 165

Glu Ala Lys Val Gln Trp Lys Val Asp Asn Ala Leu Gln Ser Gly
                170                 175                 180

Asn Ser Gln Glu Ser Val Thr Glu Gln Asp Ser Lys Asp Ser Thr
                185                 190                 195

Tyr Ser Leu Ser Ser Thr Leu Thr Leu Ser Lys Ala Asp Tyr Glu
                200                 205                 210

Lys His Lys Val Tyr Ala Cys Glu Val Thr His Gln Gly Leu Ser
                215                 220                 225

Ser Pro Val Thr Lys Ser Phe Asn Arg Gly Glu Cys
                230                 235
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D14

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   1               5                   10                  15

  Ser Ile Ala Thr Asn Ala Tyr Ala Glu Val Gln Leu Val Glu Ser
                  20                  25                  30

  Gly Gly Gly Leu Val Gln Pro Gly Gly Ser Leu Arg Leu Ser Cys
                  35                  40                  45

  Ala Ala Ser Gly Phe Asn Ile Lys Asp Thr Tyr Ile His Trp Val
                  50                  55                  60

  Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val Ala Arg Ile Tyr
                  65                  70                  75

  Pro Thr Asn Gly Tyr Thr Arg Tyr Ala Asp Ser Val Lys Gly Arg
                  80                  85                  90
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```
Phe Thr Ile Ser Ala Asp Thr Ser Lys Asn Thr Ala Tyr Leu Gln
                  95                100             105

Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys Ser
                 110                115             120

Arg Trp Gly Gly Asp Gly Phe Tyr Ala Met Asp Tyr Trp Gly Gln
                 125                130             135

Gly Thr Leu Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser
                 140                145             150

Val Phe Pro Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr
                 155                160             165

Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val
                 170                175             180

Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr
                 185                190             195

Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser
                 200                205             210

Val Val Thr Val Pro Ser Ser Ser Leu Gly Thr Gln Thr Tyr Ile
                 215                220             225

Cys Asn Val Asn His Lys Pro Ser Asn Thr Lys Val Asp Lys Lys
                 230                235             240

Val Glu Pro Lys Ser Cys Asp Lys Thr His Thr Gly Pro Phe Val
                 245                250             255

Cys Glu Tyr Gln Gly Gln Ser Ser Asp Leu Pro Gln Pro Pro Val
                 260                265             270

Asn Ala Gly Gly Gly Ser Gly Gly Gly Ser Gly Gly Gly Ser Glu
                 275                280             285

Gly Gly Gly Ser Glu Gly Gly Gly Ser Glu Gly Gly Gly Ser Glu
                 290                295             300

Gly Gly Gly Ser Gly Gly Gly Ser Gly Ser Gly Asp Phe Asp Tyr
                 305                310             315

Glu Lys Met Ala Asn Ala Asn Lys Gly Ala Met Thr Glu Asn Ala
                 320                325             330

Asp Glu Asn Ala Leu Gln Ser Asp Ala Lys Gly Lys Leu Asp Ser
                 335                340             345

Val Ala Thr Asp Tyr Gly Ala Ala Ile Asp Gly Phe Ile Gly Asp
                 350                355             360

Val Ser Gly Leu Ala Asn Gly Asn Gly Ala Thr Gly Asp Phe Ala
                 365                370             375

Gly Ser Asn Ser Gln Met Ala Gln Val Gly Asp Gly Asp Asn Ser
                 380                385             390
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Pro Leu Met Asn Asn Phe Arg Gln Tyr Leu Pro Ser Leu Pro Gln
            395             400             405

Ser Val Glu Cys Arg Pro Phe Val Phe Ser Ala Gly Lys Pro Tyr
            410             415             420

Glu Phe Ser Ile Asp Cys Asp Lys Ile Asn Leu Phe Arg Gly Val
            425             430             435

Phe Ala Phe Leu Leu Tyr Val Ala Thr Phe Met Tyr Val Phe Ser
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Thr Phe Ala Asn Ile Leu Arg Asn Lys Glu Ser
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D14

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gctgctcaca tgacccggca a 21

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<210> 35
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12

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<400> 36
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<400> 41
gctgctcact cccggcaa 18

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D14

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gctgctcact tccggcaa 18

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<210> 45
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<220>
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Ala Asn His Gln
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14

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<210> 46
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 Lys Glu Asn Thr
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<210> 47
<211> 4
<212> PRT
<213> Artificial sequence

<220>
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<400> 47
 Thr Trp Gly Ser
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<210> 48
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 Pro Glu Glu Arg
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<400> 49
 Leu Pro Pro Ser
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D14

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<220>
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<400> 51
 Gln Gln Ser Asn
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<210> 52
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<220>
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 Gly Ser Lys Thr
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D14

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 Thr Pro Val Thr
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<210> 54
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 Arg Ser Arg Ala
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<210> 55
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<220>
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 Leu Cys Gly Leu
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16

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<220>
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<400> 56
  Thr Gly Arg Leu
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<210> 57
<211> 4
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<220>
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<400> 57
  Ala Lys Ala Ser
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D14

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<220>
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<210> 59
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<400> 59
  Lys Thr Glu Gln
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<210> 60
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<220>
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<400> 60
  Asn Asn Cys Arg
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17

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<220>
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<220>
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 Asn Ser Asp Phe
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<400> 63
 His Arg Pro Ser
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<210> 64
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<400> 64
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<210> 65
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DJ4

18

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<220>
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<400> 66
 Leu Thr Thr Glu
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<210> 67
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<400> 67
 Pro Ser Gly Gly
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<210> 68
<211> 4
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<400> 68
 Leu Trp Phe Pro
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<210> 69
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<212> PRT
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<220>
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<400> 69
 Pro Ala Gly Ser
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<210> 70
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D14

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 Gly Thr Asn Gly
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 Cys Val Leu Gln
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 Ala Leu Leu Leu
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D14

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